

INDEX.

- A**
- Atlantic and Mississippi Railroad, 625, 796, 171, 4
Alabama, Finances of, 38
Attakapas Railroad, 32
Albany and Schenectady Railroad, 451, 75
Albany and Western Railroad, 346, 285, 153
Alabama and Tennessee Railroad, 341, 315, 231, 203
Anthraxite, Beds of, R. L., 329, 298
Alabama Railroad, 501, 314
Atlantic Steamers, 337
Alabama and Nashville Railroad, 406
Atlantic and Western Railroad, 372, 338
Asphaltum in New Brunswick, 660
Ashtabula, Painesville and Cleveland Rail-
road, 757, 661
Atlantic and St. Lawrence Railroad, 744, 682, 668
[590, 503, 488, 169, 121, 113]
Atlantic and Gulf Railroad, Florida, 691
Atlanta and La Grange Railroad, 739
Alabama and Tennessee River Railroad Co., 775
Adhesive power of Locomotives, Means of
augmenting, 105
Alexandria and Orange Railroad, 247, 342, 393
[439, 477, 600, 711, 726]
American Association for advancement of
Science, 309
America, Shipping, 309
American Sea Steamers, 357
Amherst and Belchertown Railroad, 421
America, Trade of, 621
America and Ireland, Steam Communication
between, 644
Alleghany Valley Railroad, 612, 676
Artesian Wells, Paris, 676
American vs. English Roads, 726
Adirondack Steel Co., 37
Africa, Dimensions of Steamer, 292
Accidents on Massachusetts Railroads, 1830, 295
Africa and Homestead Railroad, 311
Air-Line Railroad, 792, 491
Artificial Means of Communication, Influence
of, 731
Akron Branch Railroad, 217, 422, 716
Altoona and Bangor Railroad, 551, 533, 266
Akron and Hudson Railroad, 293
Astronomical Clock, 307
Axonic System of Lake Superior, 308
Androskoggin Railroad, 828, 519, 405
Androskoggin and Keenebec Railroad, 631, 552, 420
Alton, Mt. Carmel and New Albany Rail-
road, 600, 619
Appomattox, Bridge across the, 608, 711
Auburn and Ithaca Railroad, 43
Augusta and Waynesboro' Railroad, 43
Ashmetot Railroad, 359, 341, 46
Aurora Branch Railroad, 669, 485, 293, 188
Anhydrous Steam, 578
- B**
- Baltimore and Ohio Railroad, 729, 726, 716, 706,
[676, 673, 661, 648, 616, 604, 603, 600, 555, 537,
321, 476, 420, 377, 217, 245, 187, 42, 12]
Barre, Boston and Gardiner Railroad, 21
Baltimore and Susquehanna Railroad, 812, 759, 570,
[293, 262, 53]
Baltimore and Ohio Canal, 168
Baltimore and Annapolis Railroad, 828
Banks in the United States, 181
Black Rock and Fort Erie Suspension Bridge, 218
Baltimore and Cincinnati Railroad, 340
Baltimore and Ohio Railroad Stock, sale of, 342
Brantford and Buffalo Railroad, 779, 699, 690, 372
Baltimore and Ohio Railroad, Extension West,
[564, 465, 437]
Baltimore and Philadelphia Centenary, 536, 488
Baltimore Western Connections, 549
Banks of United States from 1834 to 1851, 566
Balance of Trade, 721
Bellefontaine and Indianapolis Railroad, 669, 555,
[436, 420, 218, 177, 106]
Belpre and Cincinnati Railroad, 561, 369, 343, 229
Bellefontaine and Indiana Railroad, 680, 536, 520,
[281, 266]
Beaver County, Pennsylvania, Railroad Meet-
ing, 311
Bennington and Troy Railroad, 407
Belchertown and Amherst Railroad, 421
Berkshire and Hudson Railroad, 472
Belvidere Delaware railroad, 386
Britannia Bridge, 465, 180, 46
British Navy, 186
Binghamton and Syracuse Railroad, 700, 603, 439
British Provinces, 456
Bridging the Nile, 573
Bridge across the Medway, 361
British North America, Railroads in, 644, 641, 609
British Association for Advancement of
Science, 711
Bridge across the Morsey, 802
Boilers, Incrustation of, 3
Boston and Worcester Railroad, 89, 73
Boston, trade of, with California, 124
Blossburg to Elmira, Railroad from, 212
Boardman's Patent Boiler, 212
Boston, Concord and Montreal Railroad, 633, 409,
[339, 329, 338]
- C**
- Boston and Maine Railroad, 598, 392
Boston and Providence Railroad, 409
Boston and Montreal Railroad, 437
Bloomington and Springfield Railroad, 474, 441
Boston, Railroad matters in, 517
Boiler Explosions, Prevention of, 578
Bowling Green and Tennessee Railroad, 619
Boston Railroads, 662
Buffalo, commerce of, 681, 37
Buffalo and State Line Railroad, 167
Building Stones, American and Foreign, 210, 194
Blue Ridge Tunnel, 727, 711, 650, 436, 198
Buffalo and Conchocton Valley Railroad, 678, 568,
[536, 504, 263, 248]
Buffalo and Rochester Railroad, 361, 188
Buffalo and Brantford Railroad, 779, 699, 690, 372
Buffalo and New York City Railroad, 616, 568,
[566, 374]
Buffalo and Niagara Falls Railroad, 376
Buffalo, Bayou, Bragos and Colorado Rail-
road, 471
Burlington and St. Lawrence Railroad, 726, 709, 118
Buckfield Branch Railroad, 421
Burkeville, Texas, Convention at, 595
Bytown and Prescott Railroad, 679, 604, 474
- C**
- Canals, Commerce of the New York, 1850, 31
Canal Tonnage at Toledo, 828
Canandaigua and Corning Railroad, 572, 421,
[529, 106]
Canton Stock, 113
Camden and Amboy Railroad, 124
Chattanooga, Harrison and Cleveland Rail-
road, 154
Canandaigua, Railroad per, 183
Canal boats propelled by steam, 183
Canada, Chambly Canal, 258
Chatham, Lebanon Springs and Hoosic
River Railroad, 247
Crawfordsville and Wabash Railroad, 263
Caustic Lime, use of, 325, 277
Canada, Commerce for 1850, 279
Champlain and St. Lawrence Railroad, 475, 283
Caoutchouc, properties peculiar to, 294
California Railroads, 294
Canandaigua and Niagara Falls Railroad, 604,
[359, 295]
Cast Iron Tires, 313
Cape Vincent and Rome Railroad, 358
Carrollton Railroad, extension of, 358
Change in Locomotion, Ohio, 370
Cattle on Railroads, 371
Canada, public debt of, 372
Cars on West Bank of Kentucky, 372
Catskill and Schenectady Railroad, 396
Chattanooga and Cleveland Railroad, 407
Crawfordsville Railroad, 407
Cape Cod Branch Railroad, 409
Charlotte and South Carolina Railroad, 410
Catawissa Railroad, 423
Canada, Important Railroad movements in, 423
Canal Certificates, 515
California, Steamers of, 555, 475, 439, 359, 297, 217, 183, 52
Catawissa, Williamsport and Erie Railroad, 706,
[588]
Charles River Railroad, Massachusetts, 600
Canandaigua and Jefferson Railroad, 604
Cast Iron Machinery, 616
Chartiers Creek Railroad, Pennsylvania, 679, 634
Canada, Canals in, 658
Crawfordsville and Lafayette Railroad, 661
Charleston and Memphis Railroad, 727, 712, 667,
[537, 406, 377, 345, 306, 247, 219, 200, 187, 169, 82]
Canada Railroads, 689
Charleston, Commerce of, 743
Canal at Sault Ste Marie, 786, 749
Carroll County Railroad, 769
Cannel Coal in Ohio and Pennsylvania, 808
Canada Railroads, connection with Ameri-
can, 810, 811
Clearances for the United States, 1850, 32
Cleveland and Pittsburgh Railroad, 711, 601, 599,
[555, 475, 439, 359, 297, 217, 183, 52]
Census of the United States 1850, 804, 77, 77
Central Railroad of Illinois, 88
Cheshire Railroad, 601, 392, 328, 122
Cleveland and Columbus Railroad, 745, 648, 569,
[409, 250, 138]
Chemistry, principles of, 551
Cleveland, Norwalk and Toledo Railroad, 351,
[821, 391, 184, 182, 14]
Cleveland, Railroad to, 187
Cedar Bluff, Railroad Convention at, 823
Centrifugal Action, Applications of, to Manu-
facturing purposes, 279
Central Military Tract Railroad, Illinois, 791, 295
Cleveland, Ohio, resources, 373
Cleveland, Columbus and Cincinnati Railroad,
[793, 585, 392]
Cleveland and Chattanooga Railroad, 406
Cheapness and Rapidity of Travel on Railroads,
[582]
Cleveland Coal Trade, 614
Cleveland and Mahoning Railroad, 620
Cleveland, Painesville and Ashtabula Railroad,
[757, 661]
Cleveland Steam Engines, 727
Central Indiana Railroads, 727
- C**
- Cleveland, Commerce of, 788
Cleveland and Wellsville Railroad, 796
Cleveland and Wheeling Railroad, 796
Chimney of the Edinburgh Gas Works, 179
Civil Engineers, Institution of, 386, 212
Cincinnati and Belpre Railroad, 561, 369, 343, 229,
[317]
Cincinnati and Lake Erie, Railroads between, 341
Chicago, Continuous Line to, 310
Clipper Ship Flying Cloud, 315
Cincinnati and Baltimore, Railroad between, 340
Cincinnati and Zanesville Rail-
road, 603, 551, 520, 346, 343
Cincinnati, Hamilton and Dayton Railroad, 743,
[711, 584, 566, 375, 343]
Cincinnati, Columbus and Cleveland Railroad,
[793, 585, 392]
Cincinnati and Chicago Railroad, 503, 393
Civil Engineer, England's Master Spirit, 404
Chicago and Galena Union Railroad, 711, 681,
[680, 600, 407, 403]
Cincinnati and Pittsburg Railroad, 710, 554, 434
Cincinnati and Seaboard Railroad, 586, 546, 508
Cincinnati and Marietta Railroad, 566, 551, 453
Cincinnati and St. Louis Railroad, 759, 566, 537
Cincinnati, Wilmington and Zanesville Rail-
road, Company, 682
Cincinnati, Charleston and Savannah Rail-
road, 698
Cincinnati to Pittsburg in a day, 710
Cincinnati and Mississippi Railroad, 732
Chicago and Illinois river, commerce between, 754
Cotton Manufactures in New England, 5
Coal Trade of Boston, 21
Commerce of the New York Canals 1850, 31
Coal Trade of the United States in 1851, 37, 32
Commerce of the United States 1850, 32
Commerce of the St. Lawrence Canal, 38
Columbus and Lake Erie Railroad, 53, 44
Copaqua Railroad, 45
Coca and Chatouga River Railroad, 829
Copper Mines of Lake Superior, 333, 339, 337,
[279, 47]
Columbia and Philadelphia Railroad, 504, 59
Connecticut River Railroad, 59
Connecticut, Population of, 62
Commerce of the Lakes, 785, 64
Commerce of Milwaukee, 64
Commerce of St. Lewis, 86
Coal for Gas, 86
Coal in the United States, 87
Coal Burning Locomotives, 115
Cost of Repair of Locomotive Engines, 118
Coal at Puget Sound, 134
Columbus and Xenia Railroad, 649, 585, 170
Coal cleared at Akron, 187
Coalroads and Canals, freight on, 215
Covington and Lexington Railroad, 776, 662, 555,
[391, 330, 296, 295, 292, 248]
Collieries, Ventilation of, 278
Coal at Dauphin, 278
Commerce of Canada 1850, 278
Connecticut River Railroad, 406, 372, 238
Connecticut, population of, 282
Cocheo Railroad, New Hampshire, 616, 557, 295
Cost of transporting Coal from Philadelphia
to New York, 306
Concord Railroad, New Hampshire, 359
Columbia Railroad, 793, 648, 569, 356
Coal Gas, English, 405
Columbia and Greenville Railroad, 618
Connecticut and Passumpsic Railr'd, 819, 538, 425
Cotton Statistics, 469
Columbus, Steubenville and Pittsburg Rail-
road, 503
Coal Railroad, Maryland, 503
Connecticut and Passumpsic Railroad Com-
pany, Annual Meeting, 506
Commerce of Philadelphia, 522
Copper Mining in England, 525
Copper Harbor Mines, 535
Corporate Subscriptions to Railroads, 536
Coal in Rhode Island, 329, 298
Cotoocook Valley Railroad, 571
Columbus and Jeffersonville Railroad, 571
Conemaugh, Bridge across the, 585
Coal Mines in Tennessee, 597
Copper Smelting and Manufacturing, 614
Compensating Fly Wheel, 646
Commerce of New York, 660
Common Carriers, Liabilities of, 662
Coinage in United States, 663
Covington and Mayaville Railroad, 716
Coal Trade for 1851, 716
Coal for Locomotives, 727
Coal in Valley of Virginia, 741
Commerce between Chicago and Illinois, 754
Coal in Massachusetts, 756
Columbus and Xenia and Columbus and Cleve-
land Depot Grounds, 774
Commerce of Cleveland, 788
Coal Refs, Florida, Exploration of, 306
Coal Future substitutes for, 645
Coal Trade in Kentucky, 645
Compound Rail for Railroads, 797, 774, 712, 696,
[509, 411, 233, 181, 163, 161]
- D**
- Columbus, Piqua and Indiana Railroad, 806, 518,
[429, 373, 342, 262, 218, 182, 165]
Cumberland Valley Railroad, 454, 185
Custom Receipts, 488
Cumberland Coal Region, 553
Curves and Cubic Contents, Trautwine on, 781
Crystal Palace, Lecture on Minerals, 581
- D**
- Dayton and Western Railroad, 454, 341
Dayton, Cincinnati and Wilmington Rail-
road, 343
Dayton and Indianapolis Railroad, 373
Dayton, Hamilton and Cincinnati Railroad, 743,
[711, 584, 566, 375, 343]
Danvers and Georgetown Railroad, 375
Danville Railroad, 376
Danville and Lexington Railroad, 664, 663, 439
Dayton and Michigan Railroad, 476
Dayton, Ohio, and her interests in connection
with the Dayton and Western Rail-
road, 627
Danville and Richmond Railroad, 762, 756, 650
Debt of European States, 150
Depot at Savannah, Georgia, 232
Detroit and Port Huron Railroad, 281
Depots in Charleston, 336
Delaware and Hudson Canal, 728, 665, 648
Depots at Indianapolis and Terre Haute, 631
Detroit and Pontiac Railroad, 669
Depot Grounds of Columbus and Xenia and
Columbus and Cleveland Railroads, 774
Dry Dock, Brooklyn, 163
Distances on Baltimore and Ohio Railroad, 356
Direct Trade between Europe and South, 628
Distances from Buffalo, West, 682
Distances from New York to Chicago via
Erie and Albany and Buffalo Railroad, 716
Diving Vessels, 743
Dodgeville and Potosi Railroad, 774, 281
Dubuque and Keokuk Railroad, 589, 89
- E**
- Evansville and Illinois Railr'd, 823, 662, 342, 170, 53
East Tennessee and Georgia Railroad, 781, 661,
[617, 616, 586, 406, 325, 311, 217, 199, 158, 91, 55]
Enlargement of the Erie Canal, 132
Eaton and Hamilton Railroad, 819, 566, 419, 391, 185
Earth, Rotation of the, 335
East Tennessee and Virginia Railroad, 697, 599,
[406, 359]
Eastern Terminus of Belpre Railroad, 439
Eastern Railroad Company, 441
Eastern Railroad, Massachusetts, 759, 487
Eagle Harbor Mines, 546
Evansville and Vincennes Railroad, 572, 571
Eaton and Piqua Railroad, 796, 650
Eastern Railroad and its late President, 678
Excavations and Embankments by Trautwine, 712
Electric Telegraph, Discovery of, 78
Electro-Magnetism as a motive power, appli-
cation of, 807, 180
Electro-Magnetic Locomotive, 698, 309, 218
Essex Railroad, Mass., 620, 567, 487
Essex and Morris Railroad, 533
Electric Light for Illumination, 572
Electro Metallurgy, 580
Electricity, Conduction of through water, 694
Erie Canal, Locks at Rochester, 5
Erie Canal, reduction of Tolls of, 34, 16
Erie Canal, enlargement of, 683, 259, 132
Erie Canal Tolls, 697, 681, 665, 648, 625, 600, 520,
[505, 488, 149]
Erie Canal, Tonnage and Tolls of, 171
Erie Canal, Opening of, 183
Erie Railroad, 824, 746, 712, 678, 569, 505, 296, 248,
[218]
Engine House and Machine Shop U. S. Navy
Yard, Brooklyn, 249
English Manufacturing, Statistics of, 232
Erie Canal vs. Mississippi River, 294
Erie County, Railroad through, 296
Elmira and Williamsport Railroad, 487, 298
Erie Railroad Celebration, 313
Erie Railroad, Opening of, 329, 321
Erie to Ohio State Line, railroad from, 341
English Institution, Civil Engineers, 404
Erie and North-East Railroad, 533
Erie and New-York City Railroad, 566
English Railways, Experience of, 582
English Coal Trade, Statistics of, 645
Emigration from Great Britain, 615
English Railways, 673, 515, 310, 246, 179, 76
Exports of Great Britain, 595
European and North American Railroad, 757,
[696, 550, 481, 449, 393, 297, 280, 273, 247, 231,
231, 225, 217, 203, 185, 171, 149, 79, 66, 49, 21, 1]
Europe and the South, Direct trade be-
tween, 628
European States, Public Debts, and Standing
Armies of, 645
Egypt, Railroad from Cairo to Alexandria, 614,
[573, 219]
- F**
- Flax, Manufacture of, 48
Fall River Railroad, 392, 59
France, Steam power of, 283

INDEX.

- A**
- Atlantic and Mississippi Railroad, 625, 796, 171, 4
Alabama, Finances of, 38
Attakapas Railroad, 32
Albany and Schenectady Railroad, 451, 75
Albany and Western Railroad, 346, 285, 153
Alabama and Tennessee Railroad, 341, 315, 231, 203
Anthraxite, Beds of, R. L., 329, 298
Alabama Railroad, 501, 314
Atlantic Steamers, 357
Alabama and Nashville Railroad, 406
Atlantic and Western Railroad, 372, 338
Asphaltum in New Brunswick, 660
Ashtabula, Painesville and Cleveland Rail-
road, 757, 661
Atlantic and St. Lawrence Railroad, 744, 682, 668
[590, 503, 488, 169, 121, 113]
Atlantic and Gulf Railroad, Florida, 691
Atlanta and La Grange Railroad, 739
Alabama and Tennessee River Railroad Co., 775
Adhesive power of Locomotives, Means of
augmenting, 105
Alexandria and Orange Railroad, 247, 342, 393
[439, 477, 600, 711, 726]
American Association for advancement of
Science, 309
America, Shipping, 309
American Sea Steamers, 357
Amherst and Belchertown Railroad, 421
America, Trade of, 621
America and Ireland, Steam Communication
between, 644
Alleghany Valley Railroad, 612, 676
Artesian Wells, Paris, 676
American vs. English Roads, 726
Adirondack Steel Co., 37
Africa, Dimensions of Steamer, 292
Accidents on Massachusetts Railroads, 1830, 295
Africa and Homestead Railroad, 311
Air-Line Railroad, 792, 491
Artificial Means of Communication, Influence
of, 731
Akron Branch Railroad, 217, 422, 716
Altoona and Bangor Railroad, 551, 533, 266
Akron and Hudson Railroad, 293
Astronomical Clock, 307
Azoic System of Lake Superior, 308
Androskoggin Railroad, 828, 519, 405
Androskoggin and Keenebec Railroad, 631, 552, 420
Alton, Mt. Carmel and New Albany Rail-
road, 600, 619
Appomattox, Bridge across the, 608, 711
Auburn and Ithaca Railroad, 43
Augusta and Waynesboro' Railroad, 43
Ashmetot Railroad, 359, 341, 46
Aurora Branch Railroad, 669, 485, 293, 188
Anhydrous Steam, 578
- B**
- Baltimore and Ohio Railroad, 729, 726, 716, 706,
[676, 673, 661, 648, 616, 604, 603, 600, 555, 537,
321, 476, 420, 377, 217, 245, 187, 42, 12]
Barre, Boston and Gardiner Railroad, 21
Baltimore and Susquehanna Railroad, 812, 759, 570,
[293, 262, 53]
Baltimore and Ohio Canal, 168
Baltimore and Annapolis Railroad, 828
Banks in the United States, 181
Black Rock and Fort Erie Suspension Bridge, 218
Baltimore and Cincinnati Railroad, 340
Baltimore and Ohio Railroad Stock, sale of, 342
Brantford and Buffalo Railroad, 779, 699, 690, 372
Baltimore and Ohio Railroad, Extension West,
[564, 465, 437]
Baltimore and Philadelphia Centenary, 536, 488
Baltimore Western Connections, 549
Banks of United States from 1834 to 1851, 566
Balance of Trade, 721
Bellefontaine and Indianapolis Railroad, 669, 555,
[436, 420, 218, 177, 106]
Belpre and Cincinnati Railroad, 561, 369, 343, 229
Bellefontaine and Indiana Railroad, 680, 536, 520,
[281, 266]
Beaver County, Pennsylvania, Railroad Meet-
ing, 311
Bennington and Troy Railroad, 407
Belchertown and Amherst Railroad, 421
Berkshire and Hudson Railroad, 472
Bevridge Delaware railroad, 386
Britannia Bridge, 465, 180, 46
British Navy, 186
Binghamton and Syracuse Railroad, 700, 603, 439
British Provinces, 456
Bridging the Nile, 573
Bridge across the Medway, 361
British North America, Railroads in, 644, 641, 609
British Association for Advancement of
Science, 711
Bridge across the Morsey, 802
Boilers, Incrustation of, 3
Boston and Worcester Railroad, 89, 73
Boston, trade of, with California, 124
Blossburg to Elmira, Railroad from, 212
Boardman's Patent Boiler, 212
Boston, Concord and Montreal Railroad, 633, 409,
[359, 329, 358]
- C**
- Boston and Maine Railroad, 598, 392
Boston and Providence Railroad, 409
Boston and Montreal Railroad, 437
Bloomington and Springfield Railroad, 474, 441
Boston, Railroad matters in, 517
Boiler Explosions, Prevention of, 578
Bowling Green and Tennessee Railroad, 619
Boston Railroads, 662
Buffalo, commerce of, 681, 37
Buffalo and State Line Railroad, 167
Building Stones, American and Foreign, 210, 194
Blue Ridge Tunnel, 727, 711, 650, 436, 198
Buffalo and Conchocton Valley Railroad, 678, 568,
[536, 504, 263, 248]
Buffalo and Rochester Railroad, 361, 188
Buffalo and Brantford Railroad, 779, 699, 690, 372
Buffalo and New York City Railroad, 616, 568,
[566, 374]
Buffalo and Niagara Falls Railroad, 376
Buffalo, Bayou, Bragos and Colorado Rail-
road, 471
Burlington and St. Lawrence Railroad, 726, 709, 118
Buckfield Branch Railroad, 421
Burkeville, Texas, Convention at, 595
Bytown and Prescott Railroad, 679, 604, 474
- C**
- Canals, Commerce of the New York, 1850, 31
Canal Tonnage at Toledo, 828
Canandaigua and Corning Railroad, 572, 421,
[529, 106]
Canton Stock, 113
Camden and Amboy Railroad, 124
Chattanooga, Harrison and Cleveland Rail-
road, 154
Canandaigua, Railroad per, 183
Canal boats propelled by steam, 183
Canada, Chambly Canal, 258
Chatham, Lebanon Springs and Hoosic
River Railroad, 247
Crawfordsville and Wabash Railroad, 263
Caustic Lime, use of, 325, 277
Canada, Commerce for 1850, 279
Champlain and St. Lawrence Railroad, 475, 283
Caoutchouc, properties peculiar to, 294
California Railroads, 294
Canandaigua and Niagara Falls Railroad, 604,
[359, 295]
Cast Iron Tires, 313
Cape Vincent and Rome Railroad, 358
Carrollton Railroad, extension of, 370
Change in Locomotion, Ohio, 370
Cattle on Railroads, 371
Canada, public debt of, 372
Cars on West Bank of Kentucky, 372
Catskill and Schenectady Railroad, 396
Chattanooga and Cleveland Railroad, 407
Crawfordsville Railroad, 407
Cape Cod Branch Railroad, 409
Charlotte and South Carolina Railroad, 410
Catawissa Railroad, 423
Canada, Important Railroad movements in, 423
Canal Certificates, 515
California, Steamers of, 555, 475, 439, 359, 297, 217, 183, 52
Catawissa, Williamsport and Erie Railroad, 706,
[588]
Charles River Railroad, Massachusetts, 600
Canandaigua and Jefferson Railroad, 604
Cast Iron Machinery, 616
Chartiers Creek Railroad, Pennsylvania, 679, 634
Canada, Canals in, 658
Crawfordsville and Lafayette Railroad, 406
Charleston and Memphis Railroad, 727, 712, 667,
[537, 406, 377, 345, 306, 247, 219, 200, 187, 169, 82]
Canada Railroads, 689
Charleston, Commerce of, 743
Canal at Sault Ste Marie, 786, 749
Carroll County Railroad, 769
Cannel Coal in Ohio and Pennsylvania, 808
Canada Railroads, connection with Ameri-
can, 810, 811
Clearances for the United States, 1850, 32
Cleveland and Pittsburgh Railroad, 711, 601, 599,
[555, 475, 439, 359, 297, 217, 183, 52]
Census of the United States 1850, 804, 77, 77
Central Railroad of Illinois, 88
Cheshire Railroad, 601, 392, 328, 122
Cleveland and Columbus Railroad, 745, 648, 569,
[409, 250, 138]
Chemistry, principles of, 551
Cleveland, Norwalk and Toledo Railroad, 551,
[821, 391, 184, 182, 14]
Cleveland, Railroad to, 187
Cedar Bluff, Railroad Convention at, 823
Centrifugal Action, Applications of, to Manu-
facturing purposes, 279
Central Military Tract Railroad, Illinois, 791, 295
Cleveland, Ohio, resources, 373
Cleveland, Columbus and Cincinnati Railroad,
[793, 585, 392]
Cleveland and Chattanooga Railroad, 406
Cheapness and Rapidity of Travel on Railroads,
[582]
Cleveland Coal Trade, 614
Cleveland and Mahoning Railroad, 620
Cleveland, Painesville and Ashtabula Railroad,
[757, 661]
Cleveland Steam Engines, 727
Central Indiana Railroads, 727
- C**
- Cleveland, Commerce of, 788
Cleveland and Wellsville Railroad, 796
Cleveland and Wheeling Railroad, 796
Chimney of the Edinburgh Gas Works, 179
Civil Engineers, Institution of, 386, 212
Cincinnati and Belpre Railroad, 561, 369, 343, 229,
[317]
Cincinnati and Lake Erie, Railroads between, 341
Chicago, Continuous Line to, 310
Clipper Ship Flying Cloud, 315
Cincinnati and Baltimore, Railroad between, 340
Cincinnati and Zanesville Rail-
road, 603, 551, 520, 346, 343
Cincinnati, Hamilton and Dayton Railroad, 743,
[711, 584, 566, 375, 343]
Cincinnati, Columbus and Cleveland Railroad,
[793, 585, 392]
Cincinnati and Chicago Railroad, 503, 393
Civil Engineer, England's Master Spirit, 404
Chicago and Galena Union Railroad, 711, 681,
[680, 600, 407, 405]
Cincinnati and Pittsburg Railroad, 710, 554, 434
Cincinnati and Seaboard Railroads, 586, 546, 508
Cincinnati and Marietta Railroad, 566, 551, 453
Cincinnati and St. Louis Railroad, 759, 566, 537
Cincinnati, Wilmington and Zanesville Rail-
road, Company, 682
Cincinnati, Charleston and Savannah Rail-
road, 698
Cincinnati to Pittsburg in a day, 710
Cincinnati and Mississippi Railroad, 732
Chicago and Illinois river, commerce between, 754
Cotton Manufactures in New England, 5
Coal Trade of Boston, 21
Commerce of the New York Canals 1850, 31
Coal Trade of the United States in 1851, 37, 32
Commerce of the United States 1850, 32
Commerce of the St. Lawrence Canal, 38
Columbus and Lake Erie Railroad, 53, 44
Copaqua Railroad, 45
Coca and Chatouga River Railroad, 629
Copper Mines of Lake Superior, 333, 339, 337,
[279, 47]
Columbia and Philadelphia Railroad, 504, 59
Connecticut River Railroad, 59
Connecticut, Population of, 62
Commerce of the Lakes, 785, 64
Commerce of Milwaukee, 64
Commerce of St. Lewis, 86
Coal for Gas, 86
Coal in the United States, 87
Coal Burning Locomotives, 115
Cost of Repair of Locomotive Engines, 118
Coal at Puget Sound, 134
Columbia and Xenia Railroad, 649, 585, 170
Coal cleared at Akron, 187
Coalroads and Canals, freight on, 215
Covington and Lexington Railroad, 776, 662, 555,
[391, 330, 296, 295, 292, 248]
Collieries, Ventilation of, 278
Coal at Dauphin, 278
Commerce of Canada 1850, 278
Connecticut River Railroad, 59
Connecticut, population of, 282
Cocheo Railroad, New Hampshire, 616, 557, 295
Cost of transporting Coal from Philadelphia
to New York, 306
Concord Railroad, New Hampshire, 359
Columbia Railroad, 793, 648, 569, 356
Coal Gas, English, 405
Columbia and Greenville Railroad, 618
Connecticut and Passumpsic Railr'd, 819, 538, 425
Cotton Statistics, 469
Columbus, Steubenville and Pittsburg Rail-
road, 503
Coal Railroad, Maryland, 503
Connecticut and Passumpsic Railroad Com-
pany, Annual Meeting, 506
Commerce of Philadelphia, 522
Copper Mining in England, 525
Copper Harbor Mines, 535
Corporate Subscriptions to Railroads, 536
Coal in Rhode Island, 329, 298
Cotoocook Valley Railroad, 571
Columbus and Jeffersonville Railroad, 571
Conemaugh, Bridge across the, 585
Coal Mines in Tennessee, 597
Copper Smelting and Manufacturing, 614
Compensating Fly Wheel, 646
Commerce of New York, 660
Common Carriers, Liabilities of, 662
Coinage in United States, 663
Covington and Mayaville Railroad, 716
Coal Trade for 1851, 716
Coal for Locomotives, 727
Coal in Valley of Virginia, 741
Commerce between Chicago and Illinois, 754
Coal in Massachusetts, 756
Columbus and Xenia and Columbus and Cleve-
land Depot Grounds, 774
Commerce of Cleveland, 788
Coal Refs, Florida, Exploration of, 306
Coal Future substitutes for, 645
Coal Trade in Kentucky, 645
Compound Rail for Railroads, 797, 774, 712, 696,
[509, 411, 233, 181, 163, 161]
- D**
- Columbus, Piqua and Indiana Railroad, 806, 518,
[429, 373, 342, 262, 218, 182, 105]
Cumberland Valley Railroad, 454, 185
Custom Receipts, 488
Cumberland Coal Region, 553
Curves and Cubic Contents, Trautwine on, 781
Crystal Palace, Lecture on Minerals, 581
- D**
- Dayton and Western Railroad, 454, 341
Dayton, Cincinnati and Wilmington Rail-
road, 343
Dayton and Indianapolis Railroad, 373
Dayton, Hamilton and Cincinnati Railroad, 743,
[711, 584, 566, 375, 343]
Danvers and Georgetown Railroad, 375
Danville Railroad, 376
Danville and Lexington Railroad, 664, 663, 439
Dayton and Michigan Railroad, 476
Dayton, Ohio, and her interests in connection
with the Dayton and Western Rail-
road, Company, 627
Danville and Richmond Railroad, 762, 756, 650
Debt of European States, 150
Depot at Savannah, Georgia, 232
Detroit and Port Huron Railroad, 281
Depots in Charleston, 336
Delaware and Hudson Canal, 728, 665, 648
Depots at Indianapolis and Terre Haute, 631
Detroit and Pontiac Railroad, 669
Depot Grounds of Columbus and Xenia and
Columbus and Cleveland Railroads, 774
Dry Dock, Brooklyn, 163
Distances on Baltimore and Ohio Railroad, 356
Direct Trade between Europe and South, 628
Distances from Buffalo, West, 682
Distances from New York to Chicago via
Erie and Albany and Buffalo Railroad, 716
Diving Vessels, 743
Dodgeville and Potosi Railroad, 774, 281
Dubuque and Keokuk Railroad, 585, 89
- E**
- Evansville and Illinois Railr'd, 823, 662, 342, 170, 53
East Tennessee and Georgia Railroad, 781, 661,
[617, 616, 586, 406, 325, 311, 217, 199, 158, 91, 55]
Enlargement of the Erie Canal, 132
Eaton and Hamilton Railroad, 819, 566, 419, 391, 185
Earth, Rotation of the, 335
East Tennessee and Virginia Railroad, 697, 599,
[406, 359]
Eastern Terminus of Belpre Railroad, 439
Eastern Railroad Company, 441
Eastern Railroad, Massachusetts, 759, 487
Eagle Harbor Mines, 546
Evansville and Vincennes Railroad, 572, 571
Eaton and Piqua Railroad, 796, 650
Eastern Railroad and its late President, 678
Excavations and Embankments by Trautwine, 712
Electric Telegraph, Discovery of, 78
Electro-Magnetism as a motive power, appli-
cation of, 807, 180
Electro-Magnetic Locomotive, 698, 309, 218
Essex Railroad, Mass., 620, 567, 487
Essex and Morris Railroad, 533
Electric Light for Illumination, 572
Electro Metallurgy, 580
Electricity, Conduction of through water, 694
Erie Canal, Lockages at Rochester, 5
Erie Canal, reduction of Tolls of, 34, 16
Erie Canal, enlargement of, 683, 259, 132
Erie Canal Tolls, 697, 681, 665, 648, 625, 600, 520,
[505, 488, 149]
Erie Canal, Tonnage and Tolls of, 171
Erie Canal, Opening of, 183
Erie Railroad, 824, 746, 712, 678, 569, 505, 296, 248,
[218]
Engine House and Machine Shop U. S. Navy
Yard, Brooklyn, 249
English Manufacturing, Statistics of, 232
Erie Canal vs. Mississippi River, 294
Erie County, Railroad through, 296
Elmira and Williamsport Railroad, 487, 298
Erie Railroad Celebration, 313
Erie Railroad, Opening of, 329, 321
Erie to Ohio State Line, railroad from, 341
English Institution, Civil Engineers, 404
Erie and North-East Railroad, 533
Erie and New-York City Railroad, 566
English Railways, Experience of, 582
English Coal Trade, Statistics of, 645
Emigration from Great Britain, 615
English Railways, 673, 515, 310, 246, 179, 76
Exports of Great Britain, 595
European and North American Railroad, 757,
[696, 550, 481, 449, 393, 297, 280, 273, 247, 231,
231, 225, 217, 203, 185, 171, 149, 79, 66, 49, 21, 1]
Europe and the South, Direct trade be-
tween, 628
European States, Public Debts, and Standing
Armies of, 645
Egypt, Railroad from Cairo to Alexandria, 614,
[573, 219]
- F**
- Flax, Manufacture of, 48
Fall River Railroad, 392, 59
France, Steam power of, 283

- France, Railroads in, 371
Frankfort and Louisville Railroad, 371, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

- Oswego and Syracuse Railroad, 374
 Ogdensburg and Northern Railroad, 365
 Ohio Central Railroad, 369, 632, 694, 536, 584, 530,
 [359, 314, 138, 60, 36]
 Ohio and Penn. Railroad, 640, 585, 560, 456, 406,
 [377, 199, 123, 89, 56]
 Ohio, Statistics of, 376, 791, 627, 567
 Ohio and Mississippi Railroad, 376, 791, 627, 567,
 [637, 593, 341, 353, 137, 153]
 Ohio and Indiana Railroad, 742, 691, 506, 139
 Ohio, State Debt of, 371
 Ohio Canals, Tolls on, 199
 Ohio, Public works of, 211, 202
 Ohio Railroads, 627, 796, 753, 572, 405, 295, 282
 Ohio, List of Iron Furnaces, 269
 Ohio Mineral Region, 269
 Ohio Junction Railroad, 741, 726, 503, 374, 250
 Ohio, Railroad Subscriptions in, 336, 250
 Ohio and Penn. Canal Co., 371
 Ohio River, First Steamboat on, 470
 Ohio and Penn. Railroad, Opening of, 507
 Ohio River, Logansport and Lake Michigan
 Railroad, 571
 Ohio and Penn. Railroad, 701, 781, 760, 713, 700,
 [691, 681, 668]
 Ohio and Indiana Railroad, Only Western
 continuation of Ohio and Penn. Rail-
 road, 730
 Ohio and Indiana Railroad, Boston W., 743
 Obstructing Railroad train, Capital trial for, 710
- P**
 Pacific Railroad, Mr. Benton's Bill, 3
 Pacific Railroad, Mr. Benton's Speech, 11
 Pacific Railroad, Mr. Whitney's plan, 25
 Panama Railroad, A. C. Transwines letter, 27
 Pacific Railroad, Route through Canada, 35
 Pacific Railroad, 568, 552, 530, 538, 505, 359, 343,
 [167, 65]
 Pacific Railroad, Missouri, 761, 680, 265, 197, 185, 74
 Plattburg and Montreal Railroad, 802, 483, 281,
 [245]
 Packet Station on West of Ireland, 267, 259
 Plank Road to Iron Mt., Missouri, 295
 Plainfield Railroad, Rhode Island, 313, 295
 Plank Roads in New York, 343
 Pacific Steamers, 358
 Panama Railroad, 817, 376
 Parkersburg Railroad, 403
 Pacific Railroad Co., 423
 Passengers to and from Boston, 597
 Patent Law, 690
 Pennsylvania Railroad, 506
 Pennsylvania Railroad, Gauge of, 336
 Penobscot and Kennebec Railroad, 318, 199, 21,
 [124]
 Pennsylvania, Finances of, 124
 Pennsylvania, Tolls on Canals of, 19
 Pennsylvania, Public Debt of, 19
 Pennsylvania, Pile-driver, 785, 728, 695, 691, 246, 78
 Pennsylvania Railroad, 811, 564, 311, 257, 102
 Pennsylvania Canals, 472, 134
 Penobscot River Railroad, 151
 Pennsylvania, Bill regulating the width of
 Gauges, 183
 Pennsylvania, Report of Canal and Railroad
 Expenditures, 196
 Pennsylvania, Central Railroad, 536, 217
 Pennsylvania, Railroad to Sunbury and Erie, 219
 Pennsylvania Railroad Va., 231
 Peoria and Oquawka Railroad, 678, 620, 561, 550,
 [428, 429, 439, 282]
 Pennsylvania and Baltimore Railroad, 292
 Peru and Indianapolis Railroad, 744, 651, 632, 584,
 [571, 487, 454, 372, 328, 293]
 Pennsylvania and Ohio Canal Co., 371
 Pennsylvania Railroad, opening of, 823, 371
 Peoria and Mississippi Railroad, 588, 339
 Peoria, Value of, 432
 Pennsylvania Co., 649
 Peoria and Burlington Railroad, 726, 709
 Peru and Goshen Railroad, 747, 727
 Peru Railroad, Indiana, 729
 President's Message, Abstract of, 729
 Pittsburgh Pa., Population of, 729
 Philadelphia, Commerce of, 665, 322, 26
 Pittsburgh and Erie Railroad, 601, 572
 Philadelphia, Wilmington and Baltimore
 Railroad, 146, 59
 Pittsburgh and Cleveland Railroad, 711, 601, 599,
 [555, 473, 438, 359, 297, 247]
 Philadelphia and Lake Erie Railroad, 291
 Pittsburgh and Steubenville Railroad, 711, 705,
 [633, 557, 439, 420, 407]
 Pittsburgh, Manufacturing of, 426
 Pittsburgh and Cincinnati Railroad, 710, 554, 434
 Pittsburgh to Erie Road, Railroad from, 436
 Pillars, Strength of, 470
 Pittsburgh to Wheeling, Railroad from, 474
 Philadelphia, Baltimore and New York, 474
 Philadelphia and Baltimore Controversy, 458, 488
 Pittsburgh, Steubenville and Columbia Rail-
 road, 503
 Philadelphia and Columbia Railroad, 713, 504
 Philadelphia and the Western Railroads, 631
 Piqua and Eaton Railroad, 650
 Philadelphia, Germantown and Norristown
 Railroad, 794, 665
 Pittsburgh and Rochester Railroad, 698
 Piqua, Hamilton and Eaton Railroad, 700
 Pile Driving, Rule for calculating the weight
 to be trusted to a pile, 738
 Progress of Locomotion, 32
 Phosphate of Lime, 63
 Fork Trade of the West, 46
 Portsmouth, Saco and Portland Railroad, 374, 86
 Providence and Worcester Railroad, 537, 342, 155
 Providence, Hartford and Fishkill Railroad, 234
 Portland and Kennebec Railroad, 662, 604, 472,
 [362, 294]
 Providence and Plainfield Railroad, 714, 342
 Potomac and Winchester Railroad, 313, 291
 Portsmouth and Concord Railroad, 342
 Providence Railroad Co., 375
 Provinces, Railroads in the, 700, 516, 401
 Providence and Boston Railroad, 409
 Providence and Hartford Railroad, 441
 Portage Lake Mining District, 325
 Portland and Montreal Railroad, Completion
 of, 577
 Post and Detroit Railroad, 669
 Postdam Railroad, New York, 706, 726
 Post Office Department, History of, 763
 Postage, Rates of, 774
 Prussia, Railroads in, 514
 Pluton Geysers of California, 593
- Q**
 Queenston Suspension Bridge, 307, 186
 Quebec to Melbourne Railroad, 599
 Quebec and St. Andrews Railroad, 632
 Quebec, Commerce of, 21
 Quebec and Richmond Railroad, 731, 689, 520, 235
 Quebec and Halifax Railroad, 747, 554, 440, 345
- R**
 Railroads in the United States in 1840, 9
 Railroad Axes, 15
 Railroad Law, 812, 745, 660, 551, 294, 235, 151, 139,
 [137, 19]
 Railroads in the United States Jan. 1851, 22
 Railroad, New route to the Coalfields, 97, 40
 Railroad Management, 97, 40
 Rail, continuous for Railroads, 43
 Railroad in Chili, 45
 Railroad from Greensburg to Wellsburg, 52
 Railroad in Georgia, 282, 74, 35
 Railroad Traffic, 220, 58
 Railroads in France, 371, 77
 Railroad from the Water Gap to Logansport Gap, 90
 Railroads in North Carolina, 105
 Railroad Economy, 115
 Railroad track, Defects of, 145, 131
 Railroad from Portsmouth to House's Point, 137
 Railroad from Utica to Fort Deposit, 167
 Railroad Companies, Liabilities of, 780, 693, 499,
 [262]
 Railroad and Wire Suspension Bridge, 279
 Raleigh and Gaston Railroad, 700, 632, 620, 584,
 [551, 503, 489, 372, 293]
 Railroad Charters in Wisconsin, 311
 Railroad Convention, Georgetown Pa., 341
 Railroads in Virginia, Progress of, 342
 Railroads in New York, 336, 421, 361
 Railroad Subscriptions, 608, 679, 567, 572, 552,
 [373, 263]
 Railroads in the Provinces, 700, 516, 401
 Railroad round the Southern shore of Lake
 Michigan, 437, 419
 Railroad Tolls, 435
 Railroad meeting at Philadelphia, 438
 Railroad Celebration in St. Louis, 451
 Railroad Meeting at Pittsburgh, 602, 476, 454
 Railroad Movements in the West, 476
 Railways, Introduction of into Great Britain, 492
 Railroad Convention, Southern and Western, 499
 Railroads in Prussia, 514
 Railroads in 1811, 516
 Railroad Matters in Boston, 517
 Railroad Project, New and Improved, 518
 Railway in Egypt, 614, 573
 Railways in 1812, Jos. E. Bloomfield's letter, 577
 Railroads, Magnetic Action on, 582
 Railroads, Cheapness and rapidity of travel on, 582
 Railroad Controversy in Indiana, 582
 Railroads in Northern Kentucky, 583
 Railroad Convention, Texas, 596
 Railroad Jubilee at Boston, 600, 513
 Railroads in British North America, 644, 641, 609
 Railroad Damages, Pacific Railroad Co., 648
 Railroads, Necessary Precautions on, 648
 Rail, Pattern of, 648
 Railway to Lexington Ky., 650
 Railroad Depots at Indianapolis and Terre-
 Haute, 651
 Railways to Indianapolis, 650
 Railroad Iron via Quebec, 650
 Railroad Convention at Abingdon, 696
 Railroad Bridge over Genesee River, 697
 Railroad Injunction, 699
 Rapids Convention, 725, 708
 Railroad Pier, 710
 Railway Convention, Iowa, 748, 710
 Railway Convention, New Haven, 737
 Railroads in the World, 738
 Railroad routes through Southern Ohio, 741
 Railroads in the Lower Provinces, 747
 Railroad from South Shore road approaching
 Detroit, 750
 Railroad Convention in Kentucky, 751
 Railroads in the South, 754
 Rail, Winslow's Compound, 797, 774, 712, 696,
 [509, 441, 233]
 Rail-Car, L. Myer's Patent, 555
 Railroad from Scranton to York and Erie
 Railroad, 815
 Railroads in Tennessee, 819
 Railroads in Ohio, 827
 Railroads in New Hampshire, 828
 Railroad through Mississippi Valley, 229
 Railroad Statistics, 802
 Railroad between Gosport and Indianapolis, 805
 Railroad in Texas, 807
 Railroad in Europe, 807
 Railroad from Gulf of Mexico to Lake Supe-
 rior, 810
 Railroad Truck, 812
 Reading Railroad, 759, 742, 713, 651, 235, 181, 36
 Remington's Bridge, 113
 Revolution on the Isthmus, 451
 Relation of Canada Railroads to Boston and
 New York, 778
 Richmond and Danville railroad, 762, 766, 650, 107
 Richmond, Fredericksburg and Potomac rail-
 road, 198
 Richmond and New Castle railroad, 571, 455
 Richmond and Quebec railroad, 731, 689, 520
 Richmond railroad, 812
 Rochester, Flour Trade of, 63
 Rochester, Bridge at, 491, 421, 186
 Rochester and Syracuse railroad, 678, 664, 532, 540,
 [474, 472, 374, 310, 295, 196]
 Rhode Island and Aurora railroad, 293
 Rhode Island, Anthracite beds of, 329, 296
 Rotation of the Earth, 355
 Roanoke and Greenville railroad, 358
 Rome and Cape Vincent railroad, 358
 Rochester and Buffalo railroad, 361
 Rock River Valley and Union railroad, 361
 Rochester, Lockport and Niagara Falls rail-
 road Co., 627, 374
 Rome and Watertown railroad, 606, 628, 374
 Routes across the Isthmus of Panama, 552, 475
 Rock Valley railroad, 557
 Rocks in Hart-Gate, Operations upon, 591
 Rome and Watertown railroad, 606, 628, 374
 Routes between Lake Ontario and New York, 663
 Rochester and Syracuse railroad, 683, 550
- S**
 Rochester and Pittsburgh railroad, 698
 Routes of Travel, Southern and Northern, 748
 Rolling tapered iron, 755
 Rutland and Washington railroad, 661, 685, 585, 105
 Rutland and Burlington railroad, 729, 648, 585, 556,
 [627, 409, 376, 329, 188, 167]
- T**
 St. Lawrence Canal, commerce of, 684, 38
 St. Lawrence and Atlantic Railroad, 682, 668,
 [662, 649, 632, 520, 503, 488, 419, 310, 263, 5]
 Statistics, Miscellaneous, 481
 Statistics of Ohio, 481
 Saint Louis, commerce of, 86
 Statistics of Indiana, 107
 Statistics of N. York Railroads, 150, 135, 166, 108
 Sacketts Harbor and Saratoga R. R., 693, 218, 183
 St. Lawrence and Champlain Railroad, 263
 Statistics of Great Britain, 291
 Saco River Railroad, 310
 Salem and New Albany Railroad, 748, 699, 690,
 [571, 518, 475, 435, 311, 177]
 St. Charles to Alton, Railroad from, 339
 Saratoga and Schenectady Railroad, 374
 Safety valve, 397
 Sandusky and Michigan Railroad, 377, 246, 387
 Sparta and Union Railroad, 711, 549, 519,
 [710, 557, 487]
 Saugus Branch Railroad, 710, 557, 487
 St. Lawrence and Lachine Canal, 488
 St. Charles and Mississippi Railroad, 762, 518
 Sangamon and Alton Railroad, 551, 533, 366
 Saratoga and Washington Railroad, 352
 St. Charles and Keokuk Railroad, 749, 723, 712
 Sandusky City and Newark Railroad, 651
 San Francisco and San Jose Railroad, 730, 294
 St. Lawrence to Lake Huron, another Rail-
 road from, 743
 Sault Ste Marie Canal, 786, 749
 Specie in the Bank of England, 63
 Steubenville and Indiana Railroad, 711, 705,
 [618, 572, 575, 263, 183, 122, 103]
 Seaboard and Roanoke Railroad, 584, 455, 314, 187
 St. Petersburg to Warsaw, Railroad from, 605, 281
 Steam Power of France, 283
 Steamer Africa, Dimensions of, 292
 Steamers from New York to Richmond, 295
 Steamers and Keokuk Railroad, 315
 Schenectady and Utica Railroad, 361
 Sea Steamers of America, 357
 Schenectady and Albany Railroad Company, 374
 Schenectady and Saratoga Railroad, 374
 Steam, early application of, 388
 Shelbyville, Rushville and Knightstown Rail-
 road, 393
 Schenectady and Troy Railroad, 393
 Steubenville and Pittsburgh Railroad, 711, 705,
 [633, 557, 439, 420, 407]
 Schenectady and Troy Railroad, 407
 Steam on Canals, 439
 Smelting Iron, improvements in, 470
 Sheet Iron, use of Ohio River, 471
 St. Genevieve, Iron Mountain and Pilot Knob
 Plank Road, 487
 Spherical State of Bodies, 500
 Seaboard and Cincinnati Railroads, 586, 546, 508
 Steamers in California, 551
 Steam Boilers, construction of, 571
 Shelbyville and Keokuk Railroad, 315
 Steam in Propelling Boats, Origin of use of, 580
 Steamer Line between Virginia and Europe, 584
 Steam Boilers, causes of explosions of, 613, 596, 588
 Steamers on Lake Erie, 620
 Steam communication between Ireland and
 America, 644
 St. Petersburg (Russia) and Moscow Rail-
 road, 637
 Steam Vessels, newly invented wheels for, 662
 Steam Carriage for Plank and common Roads,
 [714, 645]
 Steam Engine, improvement in, 727
 Steam Engines, Cleveland, 727
 Steamships, New Line of, 470
 Steam Engines, Nominal horse-power of, 629
 Shipbuilding in New York 1850, 30
 Springfield and Mansfield railroad, 153
 Shipping of America, 309
 Springs for railroads and carriages, 354
 Silver Mine in Virginia, 369
 Shipping Coal, machine for, 368
 Scioto and Hocking Valley railroad Co., 391
 Swift River railroad, Connecticut, 439
 Scioto and Hocking Valley railroad, 439
 Springfield and Bloomington railroad, 474, 441
 Springfield, Delaware and Loudonville R. R., 454
 Springfield, Bloomington and Peoria railroad, 480
 Silver Ore in Kentucky, discovery of, 510
 Springfield and London railroad, 628
 Springfield to Columbus and Xenia R. R. from, 679
 Springfield X roads, Pennsylvania, 699
 Scientific Convention at Albany, 542
 South Western railroad, 453, 439, 201, 197,
 [75]
 Sny Brook railroad, 725
 Southern Vermont railroad, 52
 South Carolina railroad, 419, 373, 326, 138, 68
 Southern railroad, 682, 605, 201, 154
 Shoe Manufactures at Lynn, 294
 St. Louis, Railroad Celebration at, 451
 South Side Railroad, Va., 600, 584, 470
 Southern and Western railroad Convention, 499
 South City of, 551
 South Berwick and Great Falls Branch Rail-
 road, 556
 St. Louis and Cincinnati Railroad, 750, 566, 557
 Southwestern Carrying Trade, 682, 563, 570
 South Ohio Railroads, 604
 St. Louis and Indianapolis railroad, 620
 Silver Branch railroad, Mass., 620
 Stonington Railroad, 663
 Sodus Point and Southern railroad, 696, 664
 Southern railroad convention, 679
 Southern Ohio, railroads through, 741
 South Carolina and Georgia railroad, result of
 opening upon the Cotton Trade, 475
 Schuylkill Coal Trade, 24
 Schuylkill Navigation Company, 203, 69
 Susquehanna railroad, 250, 300
 Sunbury and Erie railroad, 748, 651, 629, 374, 359,
 [621, 359, 219]
 Susquehanna railroad company, 251
 Suspension Bridge across the Mississippi,
 Sullivan railroad, New Hampshire, 474
 Suffolk Bank, Boston, 477
 Schuylkill inclined plane, 551
 Syracuse and Utica railroad, fares on the, 229, 103
- T**
 Syracuse and Binghamton railroad, 700, 663, 488,
 [430, 218]
 Syracuse and Rochester railroad, 683, 678, 684,
 [532, 559, 474, 472, 374, 310, 285, 229]
 Syracuse and Utica railroad, 361
 Syracuse and Oswego railroad, 374
 Syracuse and Binghamton Company, 678
- U**
 Tariff proposed, Amendment of, 81
 Taxing our Railroads, 217
 Trautwine on Railroad Curves, 761, 694, 425, 409
 Taunton Branch Railroad, 489, 475
 Trade with America, 621
 Travel West, 678, 668
 Trautwine on Excavations and Embankments, 712
 Balance of, 721
 Terre Haute and Richmond Railroad, 218, 50
 Terre Haute and Alton Railroad, 67
 Tehuantepec Railroad, 769, 760, 545, 317, 480, 30,
 [295, 92]
 Terre Haute and Indianapolis Railroad, 247
 Tennessee, Internal improvement of, 622
 Tennessee and Alabama Railroad, 346, 285, 153
 Tennessee and Virginia Railroad, 566, 372, 326
 Tehuantepec Expedition, Return of, 451
 Tennessee River and Nashville Railroad, 616
 Texas and Louisiana Railroad, 620
 Tehuantepec Affair, 631
 Tennessee Railroads, 619, 712, 710, 686
 Tennessee, Finances of, 748
 Trip to Europe, 5
 Tonnage, Mercantile of the United States, 2
 Tolls on Pennsylvania Canals, 19
 Troy and Boston Railroad, 670, 51
 Tolls upon New York Railroads, 59
 Troy and Greenbush Railroad, 123, 59
 Troy and Greenfield Railroad, 122
 Tonnage of the United States, 819
 Toledo, Canal Tonnage at, 828
 Toledo, Cleveland and Norwalk Railroad, 551,
 [821, 391, 183]
 Troy and Bennington Railroad, 407
 Troy and Schenectady Railroad, 407
 Toronto and Guelph Railroad, 650
 Toronto and Lake Huron Railroad, 710, 700, 689
 Troy and Rutland Railroad, 760
 Topographical Survey of the Lakes, 706
- V**
 Urbana, Piqua and Indiana Railroad, 373
 United States Mint, returns of, 793, 761, 713, 292,
 [214, 85, 22]
 United States, Census of, 804, 787, 403, 77
 United States railroad, 393
 Utica and Schenectady Railroad, 361, 382
 Utica and Syracuse railroad, 361
 United States, Progress of, 451
 United States, Condition of Banks of, from
 1834 to 1851, 566
 Union Canal, Penn., 812
 Usury Laws of New York, 124
- V**
 Vermont, Population of, 39
 Vermont and Massachusetts railroad, 622, 552, 302,
 [328, 46]
 Vermont railroads, 229, 218
 Vermont Western railroad, 235
 Vermont Valley Railroad Company, 455
 Vermont, New Model for, 491
 Vermont Valley railroad, 491
 Vermont Central railroad, 756, 679, 633, 409
 Virginia and Tennessee railroad, 811, 792, 788, 566,
 [372, 326, 22]
 Virginia Central railroad, 811, 775, 742, 545, 569,
 [1342, 260, 9]
 Virginia, Population of, 249, 91
 Virginia, Internal improvements of, 497, 379
 Virginia and her resources, 615, 399
 Virginia railroads, 561
 Vincennes and Evansville railroad, 571
 Virginia and Europe, Steamers between, 564
 Vincennes railroad, 646
 Virginia, Coal in Valley of, 741
- W**
 Wabash and Erie Canal, 797, 761, 664, 553, 387, 373,
 [371, 330, 265, 105, 46]
 Wabash Valley Railroad, 342, 289
 Wabash, Flood on the, 357
 Ware River Railroad, 584, 407, 372
 Watertown and Rome Railroad, 696, 631, 628, 374
 Warren and Franklin Railroad, 419
 Washington and Saratoga Railroad, 362
 Watertown, N. Y., Meeting at, 365
 Washington, Louisiana, and N. O. railroad, 447
 Water Courses, Superiority of Artificial over
 Natural, 714
 Watertown Branch, Fitchburg Railroad, 726
 Wave System of Naval Architecture, Pro-
 gress of, 766
 Waynesboro Railroad, Geo., 526
 Western Railroad, 562, 185, 120
 Wheeling Bridge, 179, 164
 Welland Canal, 601, 571, 330, 229
 Weaving in Iron, 278
 West Point and Montgomery R. R., 399, 314, 258
 Western and Atlantic Railroad, 572, 438
 Western Transportation, 676
 Wheels for Steam Vessels, 662
 Wisconsin, Population of, 4
 Williamsport and Elmira Railroad, 487, 298, 91, 71
 Wilmington and Raleigh Railroad, 714, 123
 Winchester and Alabama Railroad, 720, 679
 Wilmington and Manchester Railroad, 338, 291,
 [338, 291]
 Wisconsin, Railroad Charters in, 311
 Wilmington to New Castle, railroad from, 341
 Winchester and Potomac Railroad, 714, 342
 Whitney's Atlantic and Pacific Railroad, 748, 728,
 [422, 406]
 Winchester and Huntsville Railroad, 477
 Wilmington and Pittsburg Railroad, 477
 Wisconsin and Illinois Railroad, 619
 Wilmington and Zanesville Railroad, 769, 739
 Wire, Weaving of, 354
 Worcester and Nashua Railroad, 680, 359, 73
 World's Fair in America, 269
 Wrought Iron Beams for Steam Engines, 243
 Worcester and Providence Railroad, 57, 345, 158
- Y**
 York and Cumberland railroad, Pa., 812, 598, 217, 69
 Yorkhougham Slack Water, 91
 York and Cumberland railroad, Me., 660, 556, 119

